BROWNFIELDS PROJECTS TO IMPROVE PUBLIC HEALTH

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Summary:

Redeveloping brownfields into mixed-use communities or new greenspaces is not new. But what is new is promoting the redevelopment of brownfields on the basis of improved active living and resulting public health benefits. It is a potentially powerful way of achieving higher levels of brownfields activity with stronger public and financial support. Promoting active living is now recognized as essential for improving public health. Many brownfields are ideal for mixed-use redevelopment projects that improve public health by supporting greater physical activity. Mixed-use development that provides a walkable, pedestrian-friendly community with great green infrastructure can provide definite health benefits. The key is to have easy, safe access between residences and shopping, jobs, schools, and public spaces. Residents need pleasant, safe routes to places they go to on a regular basis, and not solely places for exercise and recreation. However, many brownfields are too small for significant mixed-use projects, but they can serve the physical activity needs of surrounding neighborhoods by being redeveloped into green spaces, such as ball parks, pocket parks, recreation fields, trails, community gardens, or community plaza and arts areas.

Introduction:
Brownfield cleanups have numerous public health benefits, even though they may be difficult to quantify, although addressing specific exposures and risks from site contaminants is usually done to justify cleanups. State cleanup programs often demonstrate their effectiveness in terms of increased employment and other socio-economic measures, without emphasizing the concomitant public health benefits, aside from any cleanup.
The medical community has now recognized the enormous importance of regular physical activity. In fact, physical activity is now the single best indicator of a personís health. But some 70 percent of adults are physically inactive. Physical inactivity is a major cause of a host of health impacts, including: heart disease, colon cancer, osteoporosis, diabetes, depression, hypertension, and obesity. Medical professionals have coined the term ìSedentary Death Syndrome,î because there are some 300,000 preventable deaths a year resulting from the various impacts of physical inactivity, especially obesity. The dominant ìsprawlî form of land development has resulted in widespread physical inactivity among children and adults, as people have become more dependent on automobiles to get just about everywhere. Sprawl means single land-use development, where the essential components of the built environment are separated by large distances from each other. Sprawl means automobile dependency. Sprawl not only is unhealthy, sprawl kills.
By using smart growth principles and new community designs, brownfields projects can improve public health by promoting routine physical activity and providing urban green infrastructure. The concept and goal is active living by design. The national epidemics of obesity and related diseases make brownfields sites more valuable than ever before. Rather than just building residences, preferred projects provide compact, walkable communities with an emphasis on mixed land-use development that provide jobs, shopping, mixed-income/higher density housing, and ample green space. Streets are designed for pedestrians, providing safe and attractive pathways for people on foot or using bicycles.
There is substantial demand for such housing. Consumer research has found that over one-third of people want an alternative to sprawl, but supply of such alternatives falls far short of demand. This means that land is more valuable than ever, especially in geographic areas where developable land is at a premium. Under these conditions, cleanup costs are more acceptable and offer more value-added. Developers would be wise to sell the health benefits of mixed-use projects on brownfields sites. They could get local health officials to support such projects.

For instance, the cleanup methods that many states are approving for brownfields often involve containment and institutional controls. Minimizing cleanup costs have driven many decisions. However, given the increased value from housing in well designed mixed-use projects, cleanup methods that allow unlimited residential exposure can be justified.

Examples of Great Mixed-Use Projects:

Summerset at Frick Park, PA

The Nine Mile Run brownfields cleanup involved addressing a huge steel making slag-heap and restoring park lands and open space. This 244-acre project creates a new high-density urban neighborhood. Residents have moved into 20 completed homes and a waiting list is growing for the remaining 680 homes to be built in subsequent phases. The community is designed to be walkable with local retail and commercial space. Residents can walk or bike to nearby recreational and commercial districts and the development is just five miles from Pittsburghís central business district and two miles from the University of Pittsburgh and Carnegie Mellon University. There are pedestrian-friendly streets, access

to mass transit, and park trails that connect with the Pittsburgh riverfront. The housing is diverse with single family houses, townhomes, and rental apartments over a broad price range.

HarborPark, Kenosha, Wisconsin

Forty-two of the 69 total acres were two industrial brownfields. Along the shore of Lake Michigan and part of downtown Kenosha, the project consists of residential housing, parks, trails, and a public museum. The green spaces are designed as public gathering places. Celebration Parkís 12 acres will accommodate festivals and concerts. HarborWalk Promenade and Park will provide continuous public access to the lake along a mile long multi-purpose trail. Another park has a fountain as an amenity. Future plans call for a farmerís market, ice rink, and performance areas. It is designed to be pedestrian-friendly with separate walking and bicycle paths. Five electric street cars restore a mode of public transportation popular in the area from 1902 to 1932. The rail line connects with a commuter rail station in downtown.
The Landings at Harborside, Perth Amboy, New Jersey
This project will incorporate the Dupont/Cable Works property as part of its $600 million mixed-use redevelopment project that includes 2,000 residential unitsótown houses and mid-rise condominiums. Also, reuse plans include 150,000 square feet of retail space, a community cultural arts center, a public waterfront promenade, new parks, and open space on an additional 49-acre tract that is predominantly brownfields.
Brownfields to Greenspace:

Many brownfields sites are too small for significant mixed-use projects, but they can serve the physical activity needs of surrounding neighborhoods by being redeveloped into green spaces, such as ball parks, pocket parks, recreation fields, community gardens, greenways, or community plaza and arts areas. There are now many examples of brownfields being converted into park areas. For example, the City of Shreveport, Louisiana, is transforming several brownfields sites into recreational parks, one of which is the redevelopment a 100-acre contaminated site into a recreational field complex. Formerly owned by the Standard Oil Company, the site was used for oil refinery and farm operations during the 1940s and 1950s. The site now consists of 35 acres of softball and baseball fields, a 26-acre soccer complex, and 39 acres of undeveloped wooded land.
The East Boston Greenway is a railroad line that has been abandoned for nearly 50 years and is contaminated with coal and coal ash. It is currently being remediated to serve as a buffer along the Logan Airport edge and will add about 12 acres of new park land and a 3.3 mile pedestrian/bike trail through the center of East Boston. There will be two paths running the length of the greenway to separate the fast-moving bicyclists, rollerbladers, and runners from the leisurely paced walkers and strollers. The trail will provide a link between the communitiesí existing parks, soccer and ball fields, and amphitheatre.
The important point, however, is that such land reuses should be explicitly designed to serve the physical activity needs of nearby residents, rather than just being good for the environment, such as a wildlife preserve, although these have their own value. Nor should development into tourism or destination attractions be viewed as comparable to greenspaces designed for local residents. For promoting public health, the focus must be on urbanized areas where significant numbers of people can benefit from a new local greenspace. Here are some examples to show the geographic diversity of this highly successful strategy:

California: Los Angeles River Greenway, Los Angeles; Damson Oil site, Venice; Welchís site, Los Angeles; Pemaco Site, Maywood; Chevron Oil Fields, Whittier
Colorado: Northside Treatment Plant, Denver
Florida: Five brownfields converted into Cascades Linear Greenway, Tallahassee
Georgia: Scripto Factory, Atlanta
Illinois: Origin Site, Chicago; Burnham Greenway, Chicago
Louisana: Cargill site, Shreveport
Massachusetts: East Boston Greenway, Boston; Columbia River Tire Site, Boston; Lowell Youth Soccer field, Lowell; Oxford Paper site, Lawrence
Michigan: BASF South Works, Wyandotte
Minnesota: Crosby Lake Business Park, St. Paul
Montana: Old Works Site, Anaconda
New York: Sixth Avenue and 15th St. Community Garden, Brooklyn; Irvington Park, Irvington; Long Dock Peninsula, Beacon
Pennsylvania: New Kensington Neighborhood Greening Program, Philadelphia; Herrís Island, Pittsburg
Rhode Island: Riverside Mills and Lincoln Lace and Braid sites, Providence (part of the Woonasquatucket River Greenway Project)
Texas: Springdale Park, Austin; Trinity River Property, Dallas
Washington: Olympic Sculpture Garden, Seattle; Gas Works Park, Seattle
Wisconsin: Hank Aaron State Trail, Milwaukee

State Programs:

New Jersey: New Jersey appears to be the only state with a state land-use plan that includes attention to promoting health through community design. The state has said: ìThe fastest-growing public health concern for New Jersey is obesity and its causes. It is becoming increasingly evident that these ëlifestyleí diseases are a result of communities designed around automobiles. ÖSprawl and automobile dominated design has resulted in communities that are not conducive to walking, bicycling or other activities, as a form of recreation or transportation. ÖThe solution is to design and redesign communities to promote walking, bicycling and active recreation near home, school and work.î The New Jersey brownfields program recognizes the desired attributes of active living type brownfields projects.

Pennsylvania: Pennsylvania has long been recognized for an outstanding brownfields program. Part of that effort is the ìGreen Opportunities for Brownfieldsî initiative. This program marries the stateís land recycling goals with its conservation planning, watershed restoration, and greenway and recreation initiatives. The state has recognized that sustainable communities ìfeature a mixture of uses, including light industry, commercial and retail, as well as a variety of housing choices. They usually include a pedestrian-oriented town center, recreation areas and access to public transportation and greenways.î There is also the Pennsylvania Greenways program that has a goal of incorporating green opportunities into 20 brownfields and integrating the sites into local greenway networks. The state said: ìGreenways are a priority for the more immediate issue of our health and wellness. According to the Pennsylvania Department of Health, the number-one health threat to our citizens is obesity. Even more alarming is the fact that the risk factors for heart disease ñ obesity and diabetes ñ are evident across the nation among more children at earlier ages. Greenways are a natural way to bring outdoor recreation and fitness opportunities closer to our homes, schools, and work places.î

Wisconsin: The state is promoting smart growth type land use in several ways, including a model code for zoning that facilitates mixed-use projects and requirements for comprehensive planning. The state explicitly has emphasized the role of brownfields redevelopment and its consistency with smart growth objectives. There is also a Green Space and Public Facilities Grant program that helps local governments clean up brownfields that will have a long-term public benefit, including the preservation of green space, the development of recreational areas or the use of a property by a local government.

Massachusetts: The Governorís Office for Brownfields Revitalization promotes use of the stateís Urban Self-Help program, a grant program to assist communities in acquiring land for park and recreation purposes, and for the development of outdoor recreation facilities. Funds can be used for the restoration or rehabilitation of land for park and outdoor recreation purposes.

New York: Deb Spicer, the physical activity coordinator for the NYS Department of Health has recognized the need for health professionals to be interested in sidewalks and bike trails, because inactivity costs NYS over $3 billion yearly. She has noted the need to make it easier to be more active by providing sidewalks, community trails, and safe neighborhoods. This should motivate brownfields projects and call attention to the benefits of promoting physical activity.

Conclusions:

Getting to the proverbial ìnext levelî of performance is always challenging. For brownfields redevelopment in the United States, a major expansion could result from explicitly linking brownfields projects to improvement of public health, aside from any cleanup. Promoting active living can be achieved by converting brownfields into walkable mixed-use communities and into new greenspaces that serve nearby communities. The considerable literature on brownfields, however, has not emphasized health benefits from promoting regular physical activity.

It is not enough to talk about ìquality of lifeî or ìlivable communities.î Direct health benefits offer an opportunity to connect with the vital concerns of many Americans who want to practice more preventive medicine under their own control. Considering the contemporary epidemics of obesity, diabetes, and other diseases associated with a lack of regular physical activity, government officials and developers need to learn more about the connection between brownfields redevelopment and physical activity.

Putting emphasis on the physical activity aspects of brownfields projects will benefit from involving local residents around the project site and public health officials. Local residents should be given ample opportunities to participate in the planning and design of both mixed-use and greenspace projects, if the projects are to be effective in promoting routine physical activities. There is considerable potential for having local and state public health officials become more involved in the early stages of brownfields projects, when they can testify to the health benefits of community designs that benefit active living.

A sign of the growing recognition of the importance of physical activity was the introduction of U.S. Senate Bill 2821 in 2002, known as the Improved Nutrition and Physical Activity Act. Federal funds would be provided to states or local governments for many possible uses, including: ìPlanning for and promotion of bike paths, walking paths, or other similar or related environmental changes that promote physical activity.î The federal Centers for Disease Control and Prevention have a host of activities related to promoting physical activity, including Active Community Environments which promotes walking, bicycling, and the development of accessible recreation facilities. In the private sector, the Robert Wood Johnson Foundation, the nationís leading philanthropy devoted to health and health care, is supporting a number of ìactive livingî programs designed to promote increased physical activity.

The new Active Living Network has formulated these messages:

Physical activity has been engineered out of daily life.
As a result of inactivity, America is facing an epidemic of obesity and related health problems.
By changing the places where we live and work, we can return physical activity to daily routines and reverse current health trends.
There is public support for creating activity-friendly places and work is underway.

Now is the time for the energetic brownfields movement to get on the physical activity bandwagon.